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URBAN RECONFIGURATION AND REVITALISATION: PUBLIC MEGA PROJECTS IN DOHA'S HISTORIC CENTRE

Florian Wiedmann, Velina Mirincheva and Ashraf M. Salama

Abstract

This paper aims to offer an assessment of the current transformation process of Doha's historic centre, which has become a major focus of public development strategies. While the historic centre was neglected during most of the second half of the 20th century, recent public initiatives have been leading to new urban morphologies and typologies. In addition to the redevelopment of the historic market and the investments in museums, a large scale mixed use development, known as Msheireb project, has been launched, which will replace an entire district. The objective of this paper is therefore to clarify how these public initiatives are modifying existing urban structures and to which extent this spatial reconfiguration contributes to major revitalisation objectives, such as diversity, consolidation and identity. The methodologies include a GIS survey to analyse the shift in urban densities, land uses and typologies as well as a Space Syntax study assessing the various levels of spatial integration in the case of the Msheireb project.

Keywords: Mega project, Doha, Historic Centre, Revitalisation, Urbanism, Msheireb Properties.

INTRODUCTION

Various factors have changed the role of historic city centres in the Gulf region. While the modern urbanisation during the second half of the 20th century led to neglect and deteriorating centres, the significance of a city core was rediscovered in most Gulf cities at the end of the 1990s. The new tendency in public development strategies to revitalise and to upgrade historic city districts has been based on five major objectives. At first, the city centre was seen as main factor in developing a unique urban identity. This objective gained importance due to the general vision of most rulers to transform their capitals into regional or even international tourism and investment hubs. Secondly, the reconnection to historic roots has been based on the objective to secure the cultural heritage of the local population, which in most cases became a social minority due to extensive immigration. Furthermore, based on the high degree of spatial integration and accessibility old centres have been rediscovered as important business hubs and therefore revitalisation strategies are seen as major factors in attracting private investors. Another objective of public investments in deteriorating areas is to prevent the increasing marginalisation of certain social groups. The last objective is rooted in the urgent need for increasing liveability and to create attractive surroundings in urban settings, particularly for highly educated communities.

Today, several examples of public revitalisation projects of old city centres can be found in the Gulf region. As in most other cases of modern Gulf urbanism, the Emirate of Dubai can be considered one of the pioneers in rediscovering the potentials of historic city districts. As early as in the mid-1990s the Dubai Municipality launched revitalisation programs for the old souq districts on both sides of the Creek in Al Ras and Al Souq Al Kabeer (Wiedmann, 2012, p. 45). Today, the traditional markets are well-integrated and established tourist centres, accessible by various modes of transport including water taxis. More recently, in 2005, the old Bastakiya district with its traditional wind towers and courtyard architecture was restored and is currently hosting various cultural institutions (Figure 1). A further initiative focused on the restoration and preservation of six mosques in the Al Shandqa district. In the Kingdom of Bahrain major revitalisation projects were carried out in the old centre of Al Muharra, one of the largest and still existing vernacular settlements in the Gulf, which is built on the principles of *cul de sacs*. An exceptional case is Abu Dhabi, where a modern grid replaced the entire historic settlement during the 1970s (Elsheshtawy, 2011). The current construction of the Central Market project attempts to maintain and to re-establish the old city district as one of the main urban centres and retail hubs.

Figure 1. The reconstructed Bastakiya district in Dubai.
(Source: Authors).

In this paper the public mega projects in the historic centre of Qatar's capital Doha are examined in order to provide insights in contemporary morphological transformations and subsequent local planning challenges. Doha itself is a rapidly growing metropolis in the Gulf, whose population has more than tripled during the last fifteen years from less than 500,000 inhabitants to almost 1.8 million today. Various public development strategies have been recently applied to transform Qatar's capital city into an emerging service hub. Investments in Al Jazeera to establish an international media hub were followed by mega projects in the education and science sectors as initiatives of Qatar Foundation. Furthermore, new airport and harbour developments aim for turning Doha into an international transit hub and large public sector engagements in real estate projects have established Doha as one of the major investment hubs in the region. A very distinct development strategy has been the launch of various projects to establish Doha as a new cultural hub in the Middle East by investing in international sports events and cultural institutions (Wiedmann, Salama and Thierstein, 2012). This emphasis on developing a cultural hub has had immediate impact on Doha's historic centre. The reconstruction of the Souq Waqif was followed by state-of-the-art museum projects and a large mixed-use development, known as Msheireb project, replacing an entire district.

Notably, two key methodologies have been applied to investigate the spatial reconfiguration of Doha's historic centre. First, GIS data, provided by the Ministry of Municipalities and Urban Planning, was evaluated in order to compare the previous land use structures and urban densities to the recently launched mega-projects. Secondly, Bill Hillier's Space Syntax methodology was used to

illustrate the changing spatial integration of the Msheireb district as a result of the new development, but before the various impacts of public mega-projects on urban morphologies are analysed a brief overview of the history of Doha's old centre needs to be introduced:

THE HISTORIC EVOLUTION OF DOHA'S CENTRE

Doha's origins are rooted in the resettlement of the Al Thani tribe on the eastern coast of the Qatari Peninsula in 1847, where its clans founded the settlement of Al Bidaa at the location of an old fishing village (Adham, 2008, p. 221). The choice of location was based on the water source Wadi Sail and the fortunate shape of the coastline, which protected the settlement from sea attacks. The development of Al Bidaa into eight distinct settlements along the shoreline, which together occupied an area of around 1.23 sq km, was a result of the need for access to the sea, land distribution to tribal clans and the location of water sources (Hasan, 1994). Al Bidaa was later renamed Doha, which either refers to a big tree standing at the coast or to the circular shape of the coastline (Al Buainain, 1999, p. 181). Doha's population during the first half of the 20th century consisted of the Al Maadhid tribe in addition to groups of Persian immigrants and East-African slaves. Each social group lived segregated in their own areas and the main centres of social interaction were the harbour, market and mosque (Al Buainain, 1999, p. 190).

Before the middle of the 20th century buildings were built based on the inherited knowledge of the indigenous population using local building materials such as palm fronds and trunks as well as coral, stones and mud. Residential buildings varied from simple buildings with one space and entrance to courtyard houses with two floors (Jaidah and Bourenane, 2009, p. 30). The design followed the Islamic tradition of dividing male and female spaces and the high degree of family privacy, which was further mirrored in the complex system of winding alleys within neighbourhoods that served as access to individual homes. In these neighbourhoods, known as *ferej*, each family clan built their homes in close proximity to each other, usually wall on wall. The high density of the built area was influenced by the hot climate and the necessity to shade walkways and exposed walls. The souq itself was partly roofed and located at the end of Wadi Sail (Figure 2). As in other Islamic port cities Doha's market stretched in linear fashion along main roads and side roads from the harbour area toward inland. The typical composition of traditional market, Friday mosque and the palace

Figure 2. The historic settlements of Doha in 1947. (Source: Authors).

formed the centre of Doha's pre-oil settlement.

When the oil production commenced during the 1950s settlement patterns rapidly transformed due to the development of modern infrastructure. The modern administration was just in its infancy and central urban planning still had limited impact on the general development (Al Buainain, 1999, p. 192). The urban form was mainly modified due to the import of cars, which led to the introduction of the first road grid, as well as air conditioning, which permitted other building typologies, and finally due to rapid urban population growth which led to expanding settlement areas. Consequently, roads were widened in central areas to provide access by car and adobe buildings were replaced by modern cement structures. Furthermore, new housing areas were constructed in a rather uncoordinated manner around the former settlement area. Due to the exponentially increasing trade of imported goods many informal shopping areas grew in proximity to the old market (Scholz, 1999, p. 201). The traditional souq itself was replaced by modern buildings during the 1960s. Its location however initially remained the main hub of commerce due its central location and accessibility.

After Qatar's national independence in 1971 the British consultant Llewelyn Davis was appointed by the new town planning authority to design the first master plan of Doha for 1990. His plan was based on a ring concept with a clear definition and a functional distribution of land uses

regarding each ring, which emphasized the old settlement area as main urban centre. During the 1970s all remaining Qatari neighbourhoods were replaced and the indigenous population moved to new suburban developments (Naqy, 2006). One main objective of the plan was to establish a modern city centre. For this purpose, informal commercial building was no longer possible and last remaining traditional buildings were replaced in order to make space for access roads and multi-storey developments. Due to various office projects in Al Salata, Doha's prime business and administration centre developed in proximity to the old centre. The historic districts however housed a rapidly growing immigrant population in rather densely built areas.

According to the first master plan 630 hectares of land was reclaimed in the north of the city centre, which included the development of a circular Corniche at the end of the 1970s (Figure 3). Consequently, Dafnah, which stretches along the Corniche towards Doha's north, became the new focal point of investment, with government buildings being erected as modern landmarks. Due to the rapid population growth from 89,000 inhabitants in 1970 to over 434,000 in 1997 many services had to be established outside the old city centre. Subsequently, new shopping malls in urban peripheries replaced central retail districts and due to the high concentration of housing for low-income groups the old city centre witnessed a gradual deterioration process (Naqy, 2000). While the

Figure 3. Doha's Corniche and its ring road system. (Source: Authors).

waterfront with main commercial and administrative buildings remained the representative façade, the historic city centre was almost exclusively used by low-income groups (Ahmadi, 2008). This resulted in Doha having no identifiable main centre and existing urban centres are perceived depending on income and cultural background (Salama, 2011).

THREE PUBLIC INITIATIVES TO REVITALISE THE HISTORIC CENTRE

The change in Qatar's rulership in 1995 when Sheikh Hamad Bin Khalifa Al Thani came to the throne opened the door to a new path of urban

developments (Fromherz, 2012). The new ruler initiated various strategies to position Doha in international and regional networks as an iconic metropolis. Three major projects emerged as a result of these initiatives in Doha's old centre. Firstly, he and his Emiri Diwan engaged Mohammed Ali Abdullah and his Private Engineering office to redesign the traditional Souq Waqif on the basis of historic photography. The 164,000 square metres site was developed between 2004 and 2008 (AKDN, 2013). Traditional construction techniques were used to re-establish the old market as authentic as possible in the heart of the old centre. Due to the previous land reclamation the market has no immediate access to the sea and the still existing fishing harbour. Large parking sites in the north and south-west were established in order to make the souq accessible for visitors. In spite the attempt of one-to-one restoration it has never been intended to reduce the function of the traditional souq to an open-air heritage museum. In addition to the roofed market a pedestrian zone was developed along the wadi housing various restaurants and souvenir shops (Figure 4). The project can be regarded as a unique experiment to combine cultural heritage, tourist attraction, public realm and leisure space with the still remaining function as traditional market place.

In addition to Souq Waqif, the Emir decided to cancel previous plans to extend the Al Salata business district on reclaimed land at the Corniche. Instead, the representative location was chosen for the Museum of Islamic Art, another prestigious landmark project to revitalise Doha's old centre

Figure 4. The Souq Waqif and the restaurants along its pedestrian zone. (Source: Authors).

(Figure 5). The museum, which was designed by the Chinese architect I. M. Pei, was completed in 2006 and opened in 2008. Its 30 hectare large site extended the public realm along the Corniche with a park surrounding the museum. The iconic architecture as fusion of modern design and traditional appearance marks the eastern end of Doha's historic settlement and sets an intended contrast to the opposite waterfront development of West Bay and its high rise cluster. Towards inland the museum clearly states its connection to the old part of Doha by being built at the end of Jaber Bin Mohd Street. Its exposed location has made it visible from many directions, which has led to a certain visual reconnection between centre and coast. In the east of Al Salata and thus in close proximity to the old city centre, the new Qatar National Museum has been launched and its construction is expected to be completed by the end of 2014 (QMA, 2013). Its large site of more than 13 hectares will include the

old national museum as well as a large green area. Its landmark architecture, designed by the French architect Jean Nouvel, is inspired by the desert sand rose and is considered to become one of Qatar's biggest tourist attractions.

Lastly, the biggest and most comprehensive revitalisation project in Qatar is the Msheireb development, previously known as Dohaland's Heart of Doha, which is carried out by a subsidy of Qatar Foundation. Its 31-hectare large site is situated in the west of Souq Waqif and its completion is expected by 2016 (Figures 6 and 7). In 2005, the old structures, mainly built during the period between 1950 and 1970, were demolished and the approximately 5.5 billion USD project was launched to revitalise the old centre by establishing residences for higher income groups, including Qatari families, offices, retail and cultural venues (Msheireb Properties, 2012). Due to a total gross floor area of almost 760,000 sq m the average

Figure 5. The Museum of Islamic Art at the Corniche. (Source: Authors).

Figure 6. The Msheireb building site in 2013. (Source: Msheireb, 2013).

Figure 7. Size and location of the Msheireb project site. (Source: Google Earth).

plot ratio is 3.1 and the maximum plot ratio reaches more than 10.0 in the south of the project, where buildings reach maximum heights of 30 floors (AECOM, ARUP, Allies and Morrison, 2010, p. 65). This high built density is mainly caused by economic feasibility considerations, but it is also part of the objective to establish shaded environments and thus to reduce the need for extensive air conditioning. Due to the plans to include a metro station on site the project will become highly accessible. Therefore museums, public plazas and high profile retail venues are integrated to transform the project into a major hub. The state-of-the-art architectural design by various architects, including Allies and Morrison, attempts to follow the reinterpretation and reinvention of local ornaments and thus to establish a new standard in modern architecture in the region (Law and Underwood, 2012, p. 145).

THE SPATIAL IMPACT ON URBAN MORPHOLOGIES

The three main public initiatives in Doha's historic centre have significant impact on urban morphologies including land uses, urban densities and spatial configuration. In the case of the Souq Waqif the agglomeration of warehouses and stores was completely replaced with a replicate of the historic market. The museum project replaced 15 hectare of potential commercial projects and extended the public realm along the Corniche. The most significant morphological transformation is however expected in the Msheireb district, where a wide range of new typologies and land uses are introduced. A survey based on historic photography as well as GIS data unveils that the district was previously mainly occupied by residences, which made up around 60% of the total gross floor area (Figure 8). The remaining plot area was occupied by offices, retail and light industries. Moreover, the

majority of buildings were medium rise apartment buildings with retail and services in ground floors. Around 25% of the built area was occupied by low-rise residential buildings. Based on GIS population statistics between 10,000 to 15,000 inhabitants lived in Msheireb before the district was demolished.

According to the Msheireb project's master plan the GFA for residential use is increased to 221,643 sq m, which is only around 30,000 sq m more than in the previous district. However, the residential share of the total GFA will decrease to 29%, which is caused by the overall increase of the GFA to 759,613 sq m. Thus, the overall built density is almost doubled to 310% of the total plot area in comparison to the previous district (Figure 9). In contrast to the former configuration, offices will occupy almost one third of the total GFA, which will lead to four times more office space. In addition, 33% of more retail space will be integrated, mainly along the ground floors. While the previous district did not house any hotels, around 16% of the future total GFA is reserved to hotel developments in the case of the new development. Small museums and the National Archive will furthermore underline the cultural importance of the new district. The most significant transformation can be expected from the resettlement of high-income groups. The northern part of the district and around one fifth of the residential GFA is reserved for local communities; while the southern and more densely built part accommodates medium to high-income expatriates and their families. This reallocation of the local community in Doha's old centre is part of the idea to introduce urban lifestyles and to initiate gentrification processes. The overall population density within the district however can be expected to drop significantly to 200 inhabitants per hectare in comparison to the previous average of around 500 inhabitants per hectare.

The high built density of the Msheireb project is mainly caused by the gradual increase in building height from three to seven floors in the

Figure 8. Comparison of total gross floor areas and land use at the Msheireb site – 2006 and 2016. (Source: Authors).

Figure 9. The architectural model of the Msheireb project. (Source: Authors).

northern to twenty to thirty floors in the southern part of the project. In contrast to the previous district, where a large quantity of around 300 small scale buildings were built side by side in dense clusters, the new development includes around 100 buildings, mainly built in large blocks (Figure 10). The close proximity between buildings however remained as a key characteristic in spite of the increase in building heights. Another main difference to the past morphology is the introduction of nine public plazas in strategic locations and the introduction of various modes of transportation including cycle and bus routes.

The architectural language in the previous district can be best described as a mix of functionally designed cement buildings. In some cases traditional courtyards were integrated, which are very suitable for the development of dense clusters and narrow streets. The urban design concept of the Msheireb project integrates the courtyard principle by translating it into modern parameter blocks, which however are reminiscent of European city cores rather than traditional Islamic cities. The large share of commercial use furthermore transforms

the previously residential neighbourhoods into a major business hub. While this shift to commercial use is needed to re-establish Doha's old core as one of the main urban centres, it also implies a discontinuation of historic urban morphologies. One key factor to reduce the negative impact of the increased GFA has been seen in architectural and urban design, which follows state-of-the-art criteria and attempts to integrate local design languages rooted in Qatar's environment and culture.

The state of spatial configurations before and after the construction of the three public initiatives was examined by comparing GIS data and new urban structures in order to detect the incurred changes in road networks. In the case of the Souq Waqif project, the new development of the Souq replaced the old buildings and the original roads were hardly changed. One exception is the new pedestrian zone, which replaced the original access road along the historic *wadi*. The Museum of Islamic Art does not have an impact on existing spatial configurations other than becoming a focal point along the extension of a major axial road into the reclaimed land.

Figure 10. A typological comparison between the Msheireb district in 2004 and the new masterplan. (Source: Google Earth).

Figure 11. Space syntax analyses of existing (left) and proposed (right) condition, showing highly integrated through-movement network (red-range lines), on the background of a more segregated inner road to-movement network (blue-range lines). (Source: Authors).

The Msheireb development, on the other hand, reconfigures the urban grid network in various ways. It is worth examining more closely the changes in spatial morphology, using a space syntax analysis (Hillier 1996). Space syntax is an analytical-methodological tool that represents the urban grid as a system of fewest and shortest lines that connect all publically accessed spaces. The urban configuration is seen as the primary generator of movement flows, which are structured in two ways – as a destination and a *to-movement* or as a choice of route - *through-movement* (Hillier et al 1993).

Figure 11 examines the existing and proposed grid conditions. Notably, while the connection between Abdullah Bin Thani Road and the neighbourhood to the south is preserved, the one perpendicular to it, the former Ukaz road does not extend all the way and into the western neighbourhood, limiting the potential for through-movement between these two urban areas. Another change occurs along Kahraba Street. While previously

Kahraba Street extended to Wadi Msheireb, in the new proposal it falls short of reaching it. Nevertheless, its through-movement value is increased with the introduction of other high-potential roads. In summary, there is one lost connection to the west, one retained connection to the south, a minor attempt to connect to the east.

Further, the master plan introduces a new centrality, parallel to Wadi Msheireb Road and extending into the centrality of Souq Waqif, thus integrating the two zones. In comparing the overall existing and proposed grid conditions, it can be said that the same degree of irregularity is maintained, thus not imposing a more linear order, but retaining a familiar degree of apparent randomness (Figure 12). Therefore, it could be concluded that the Msheireb project exhibits sensitivity to historical patterns in its proposal, which embeds a functional contemporary grid within a background of an irregular grid, formed of smaller unparallel through- and to- movement corridors.

Figure 12. The modified road grid at the Msheireb site – existing (left) and proposed (right) condition. (Source: Authors).

CONCLUSION

This paper investigated the various impacts of recent public revitalisation projects on urban morphologies in Doha's old centre. The dimensions of these projects have led and will lead to various transformations, not only regarding the physical urban environment, but also regarding social and economic structures. Therefore the five key objectives of revitalisation projects need continuous reflection. The new initiatives undoubtedly have an increasing impact on establishing a new image of the old centre. Recent observation studies and interviews, carried out by the authors, have proven that many Qataris as well as other high-income groups are now visiting the old centre due to new social attractors, such as the restaurants in Souq Waqif. Tourists, particularly business travellers, are often staying in close proximity to the old centre and are attracted to visit the new cultural and hospitality venues.

Another main objective is to re-establish the old centre as one of the key business hubs in Doha. This objective will mainly depend on the successful implementation of efficient transportation networks in order to secure the accessibility of certain areas. The high increase in built density in the case of the Msheireb project will challenge the currently car-based structures. Furthermore, it can be expected that the subsequent demand on housing units for upper income groups will continuously rise in central areas. The main development challenge in this regard is however, the fact that many surrounding urban areas are still in a deteriorating state and existing infrastructural networks would not permit any development in this direction in the near future. Moreover, the continuous removal of old structures is in contradiction with the objective to secure an evolutionary upgrading process, which integrates the various aspects of conservation and modernisation.

Due to the rapid development of the public revitalisation initiatives land prices in central areas are steadily raising, which is expected to lead to more and more demand on large-scale initiatives. This however endangers conservation attempts of old buildings reflecting the beginning of Doha's urbanism in the 1950s. While Souq Waqif has restored lost heritage from the pre-oil era, most structures built at the beginning of modern urbanisation are currently facing eventual replacement. In addition to the loss of individual buildings, the old vernacular structures and their low rise clusters with courtyards are in danger of being demolished and replaced. Another challenge in this context is the integration of low-income groups within the revitalisation process. Many other social groups who

have lived with their families in these neighbourhoods over several decades will eventually have to move due to continuous demolition. Subsequently, grown economic networks, which often have informal characteristics, will be dissolving and many social groups are forced to give up their small shops and entrepreneurial initiatives.

The large scale of the projects and their strong links to Doha's macro structures instead of their orientation to local urban fabrics will lead to more or less self-contained but segregated urban islands. The overall liveability of Doha's old centre however will profoundly depend on more cohesive and integrated developments. In order to prevent scattered initiatives the infrastructural network and the design of interlinked public realm as well as clear building regulations need to become the main focus of future urban planning. After all, the demand driven parameters of a diverse society will need to be promoted as main consolidation factors instead of large scale top down initiatives driven by public investments. Otherwise, Doha's old centre will face another clear cut in its morphological evolution as it has witnessed it during the beginning of the oil production.

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